



www.infineon.com

Marking



Never stop thinking

Edition 2006-08-01

**Published by
Infineon Technologies AG
81726 München, Germany**

**© Infineon Technologies AG 2006.
All Rights Reserved.**

Legal Disclaimer

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffenhheitsgarantie"). With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office (www.infineon.com).

Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office.

Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

1	Introduction	4
2	IC Packages	5
2.1	Standard Marking Layout	5
2.2	Standard Layout for Packages without Backside Production Code	5
2.3	Marking Layout for Small IC Packages	6
3	Discrete and RF Semiconductor Packages	7
3.1	Marking Layout	7
4	Sensor Packages	13
4.1	Surface Mounted Devices	13
4.2	Leaded and through-hole	14
5	Power-Packages	15
5.1	Marking Layout	15
6	Date Code Marking	16
6.1	Discrete Packages with one Digit (SCD80, SC79) CES-Code	16
6.2	Discrete Packages with two Digits	16

1 Introduction

Product marking is relevant for qualified products. Usually laser marked on the top side of the device (component) and identifies the product. The basic layouts for large, small and extremely small packages (devices) are shown in this chapter. For flexibility and for good layout empty lines are allowed.

The bottom side of products are most of the time marked with production code.

Several reasons are responsible that a shortened production code is moved to the top side marking and bottom side marking is omitted.

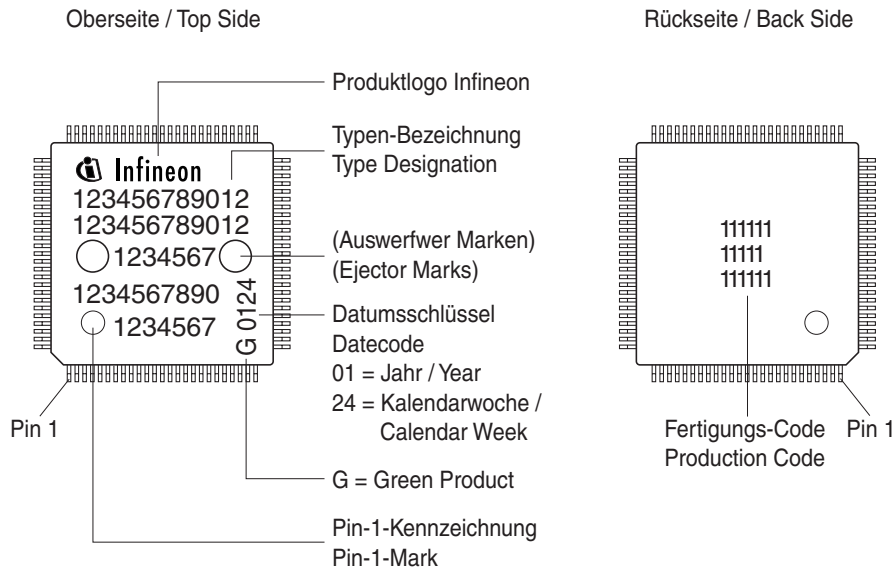
Note: Customers may require special marking deviating from standard product marking. Special marking must be based on written agreements between the customer and Infineon. It must be ordered by the customer, specified as marking text by PM (Product Marketing) and cleared with AIT (Assembly and Interconnect Technology).

2 IC Packages

Small variations in positioning of Date code, Type code and Manufacture are possible.

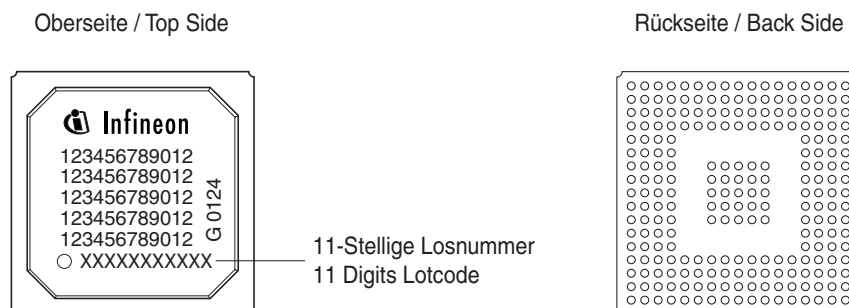
2.1 Standard Marking Layout

P/PG-TQFP-100-1



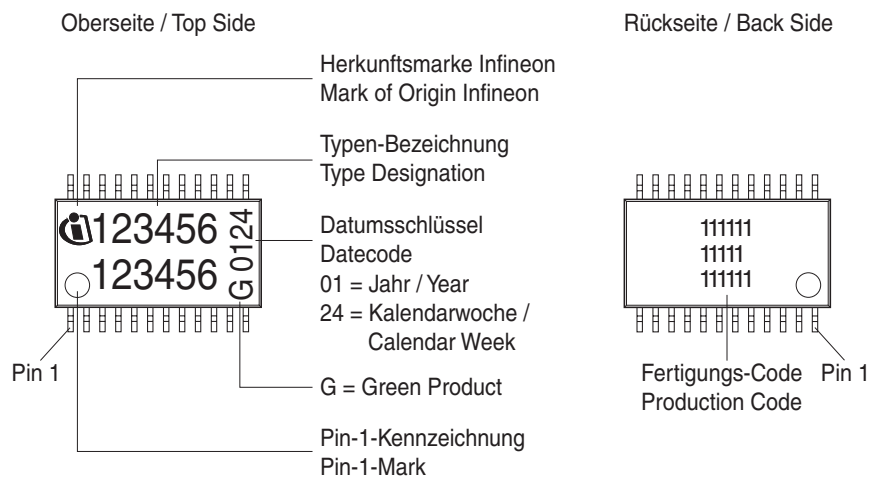
2.2 Standard Layout for Packages without Backside Production Code

P/PG-BGA-233-1



2.3 Marking Layout for Small IC Packages

P/PG-TSSOP-24-1

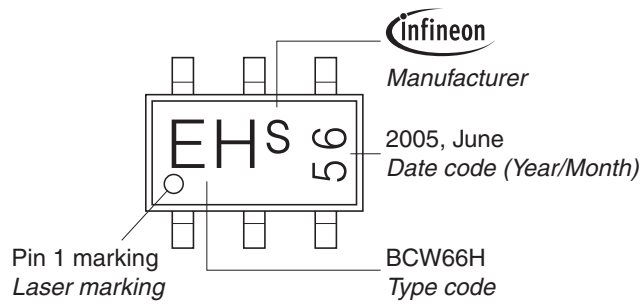


3 Discrete and RF Semiconductor Packages

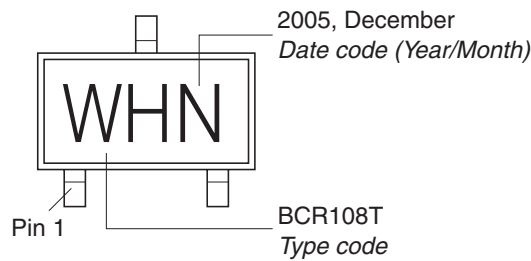
Small variations in positioning of Date code, Type code and Manufacture are possible.

3.1 Marking Layout

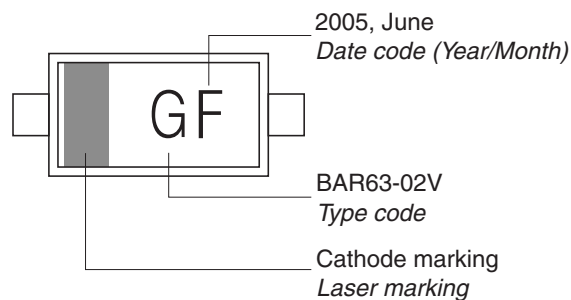
SC74 (SC-74)



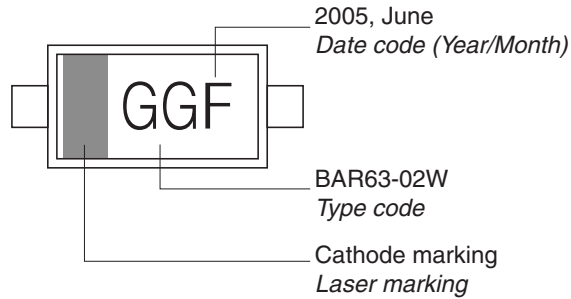
SC75 (SC-75)



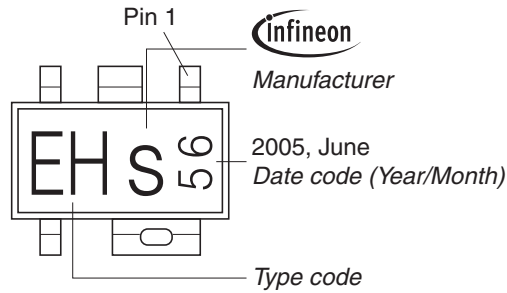
SC79 (SC-79)



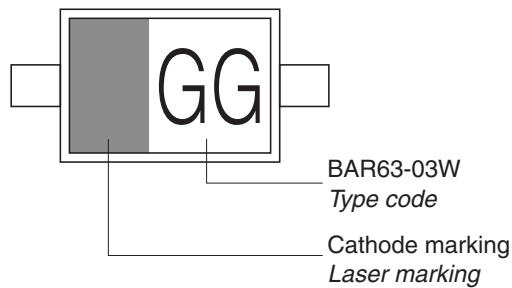
SCD80 (SC-80)



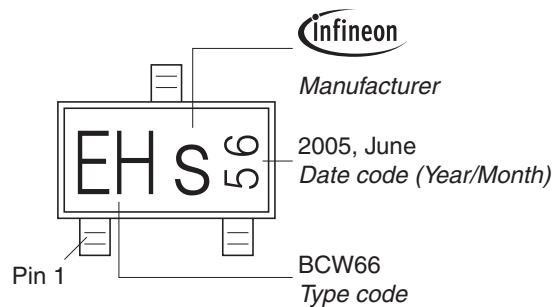
SCT595 (-)



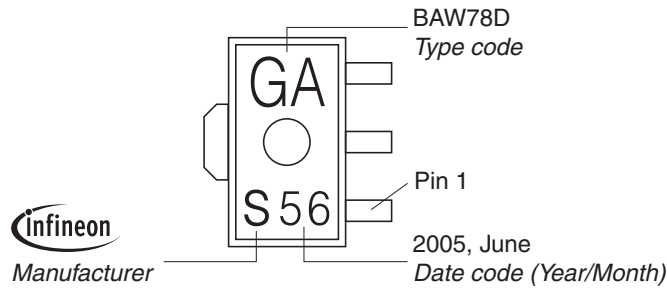
SOD323 (SC-76)



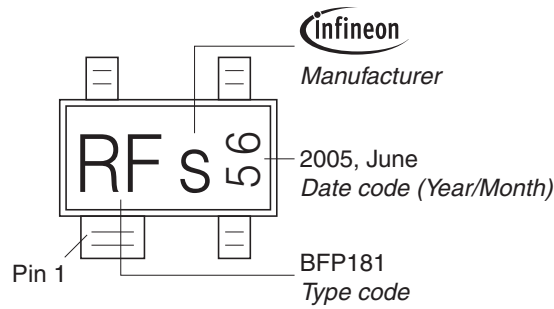
SOT23 (-)



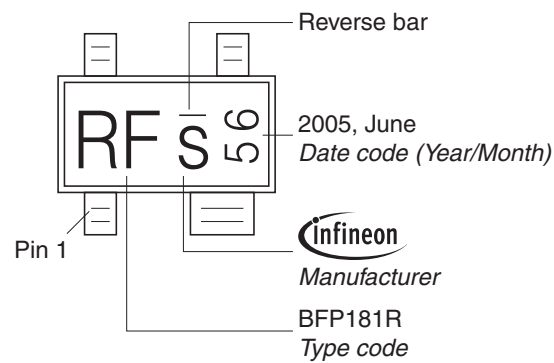
SOT89 (SC-62)



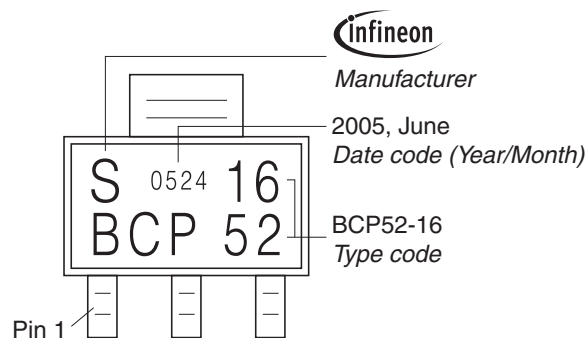
SOT143 (SC-61)



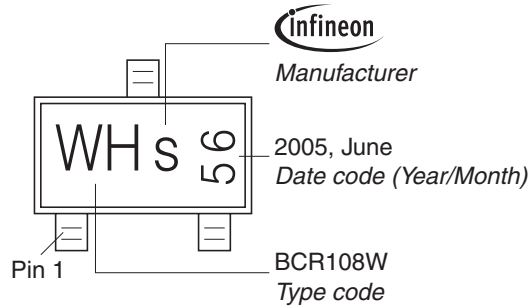
SOT143-R (SC-61A)



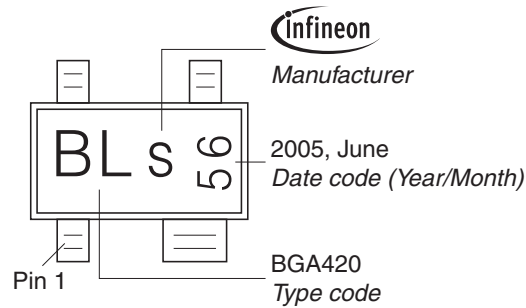
SOT223 (SC-73)



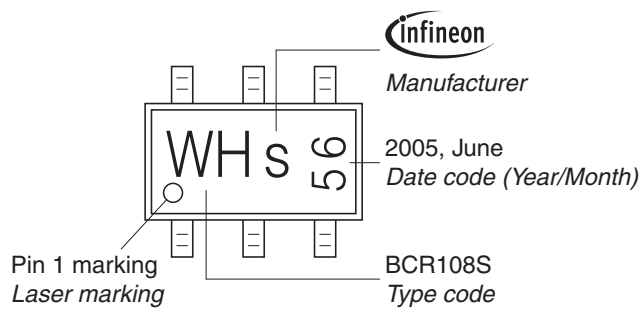
SOT323 (SC-70)



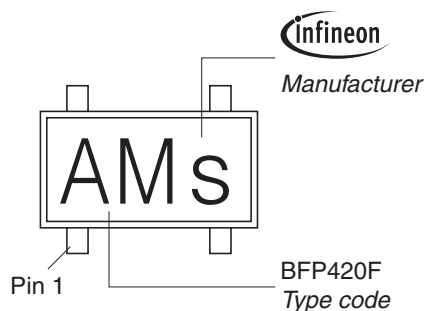
SOT343 (SC-82)



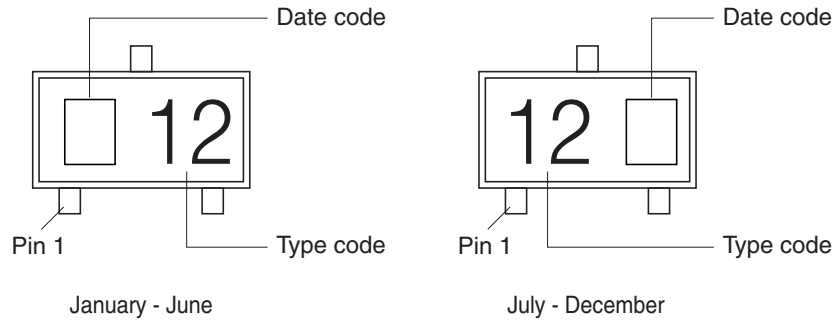
SOT363 (SC-88)



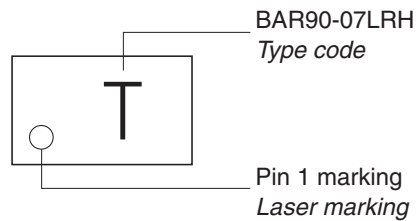
TSFP Family



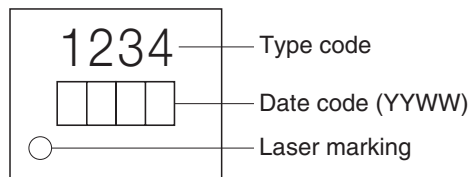
TSSF Family



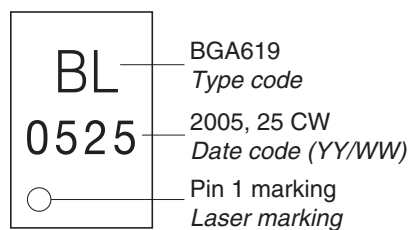
TSLP Family



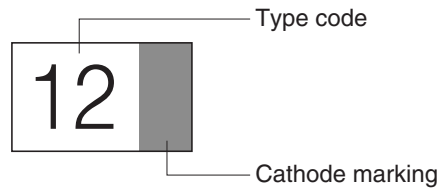
TSLP-4-5



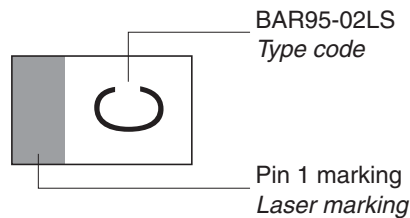
TSLP-7



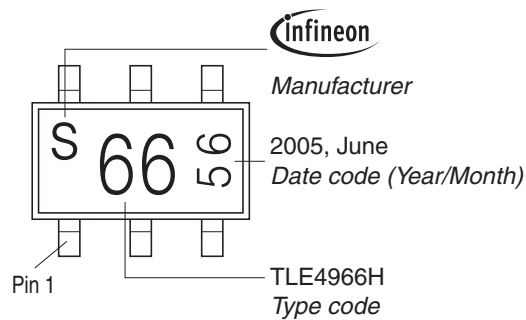
TSLP-3-7 (Only for diodes, cathode marking on pin 3)



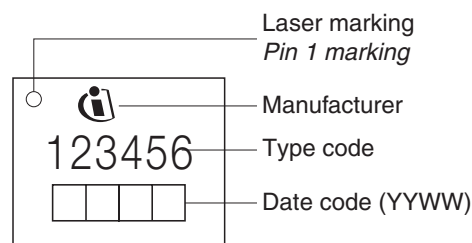
TSSLP Family



TSOP6



WLP Family

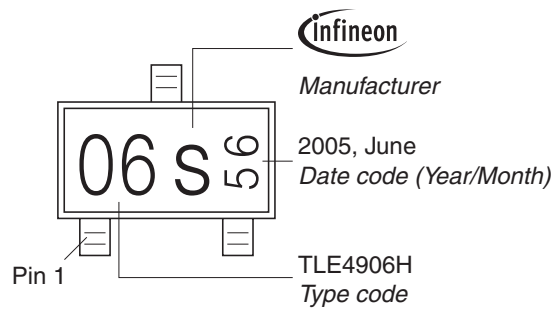


4 Sensor Packages

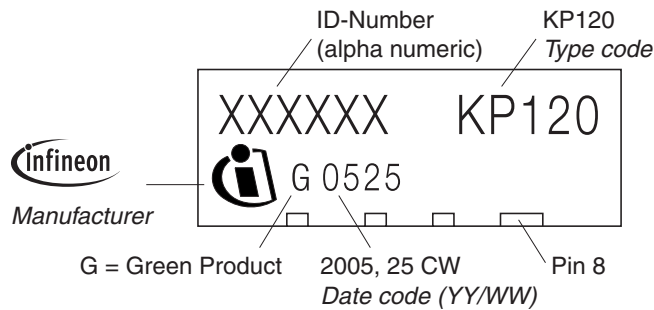
Small variations in positioning of Date code, Type code and Manufacture are possible.

4.1 Surface Mounted Devices

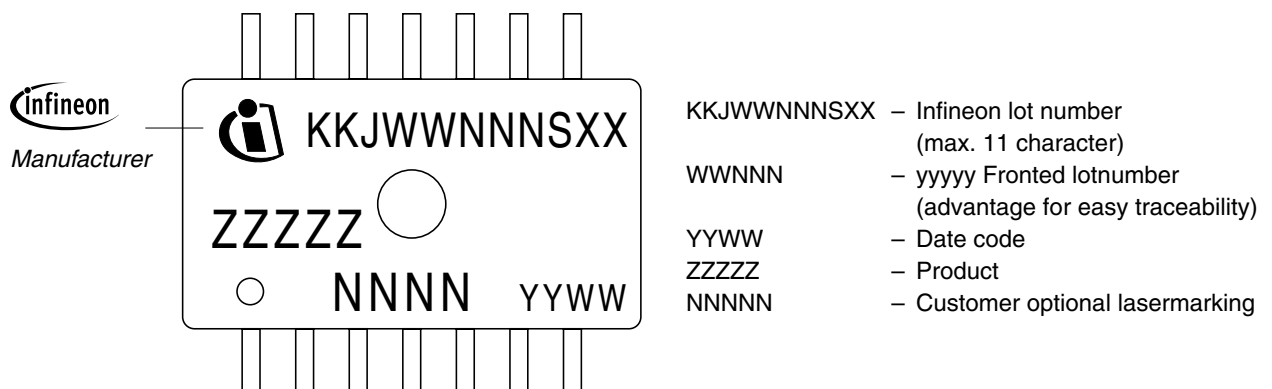
SC59 (-)



PG-DSOF-8

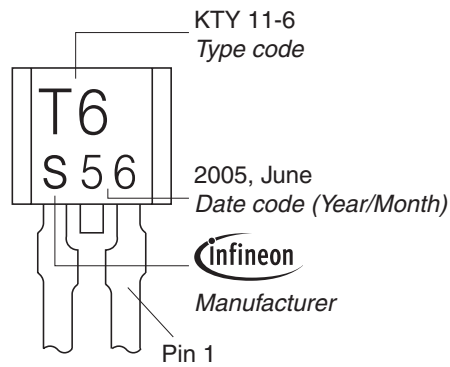


PG-DSOSP-14

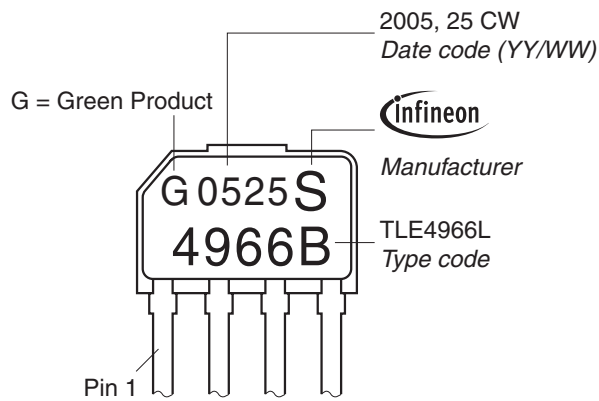


4.2 Leaded and through-hole

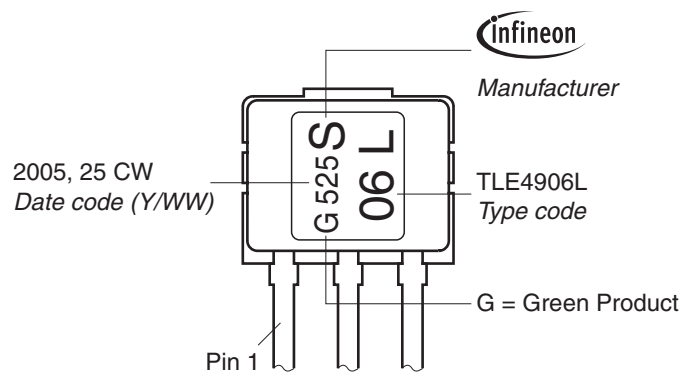
TO92 Mini



PG-SSO Family



PG-SSO-3-2

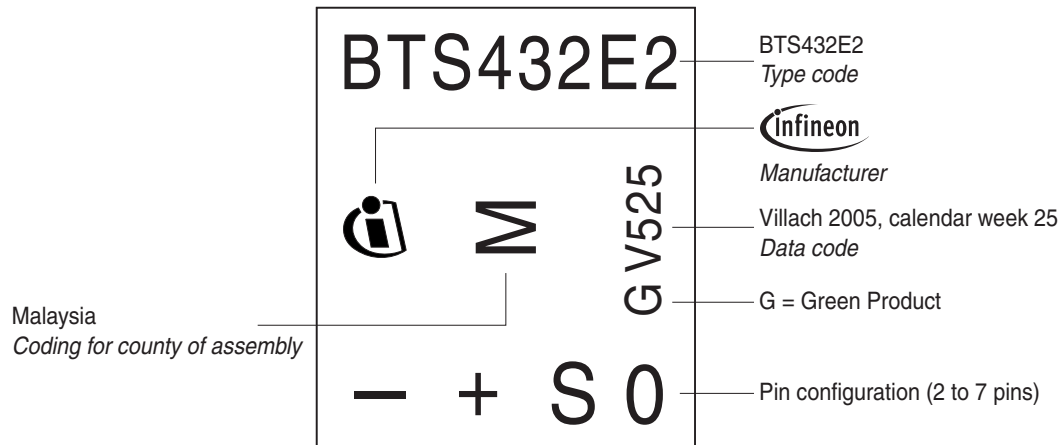


5 Power-Packages

Small variations in positioning of Date code, Type code and Manufacture are possible.

5.1 Marking Layout

P/PG-TO218/-TO220/-TO247/-TO251/-TO252/-TO262/-TO263



6 Date Code Marking

6.1 Discrete Packages with one Digit (SCD80, SC79) CES-Code

Month	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
01	a	p	A	P	a	p	A	P	a	p	A	P
02	b	q	B	Q	b	q	B	Q	b	q	B	Q
03	c	r	C	R	c	r	C	R	c	r	C	R
04	d	s	D	S	d	s	D	S	d	s	D	S
05	e	t	E	T	e	t	E	T	e	t	E	T
06	f	u	F	U	f	u	F	U	f	u	F	U
07	g	v	G	V	g	v	G	V	g	v	G	V
08	h	x	H	X	h	x	H	X	h	x	H	X
09	j	y	J	Y	j	y	J	Y	j	y	J	Y
10	k	z	K	Z	k	z	K	Z	k	z	K	Z
11	l	2	L	4	l	2	L	4	l	2	L	4
12	n	3	N	5	n	3	N	5	n	3	N	5

6.2 Discrete Packages with two Digits

Year								Month			
1970	0	1980	0	1990	0	2000	0	January	1	October	O
1971	1	1981	1	1991	1	2001	1	February	2	November	N
1972	2	1982	2	1992	2	2002	2	March	3	December	D
1973	3	1983	3	1993	3	2003	3	April	4		
1974	4	1984	4	1994	4	2004	4	May	5		
1975	5	1985	5	1995	5	2005	5	June	6		
1976	6	1986	6	1996	6	2006	6	July	7		
1977	7	1987	7	1997	7	2007	7	August	8		
1978	8	1988	8	1998	8	2008	8	September	9		
1979	9	1989	9	1999	9	2009	9				

Arronrh period is defined by 1st to last day of month (manufacturing date).

Example: >47< = 01.07.1994 – 31.07.1994 = July 1994 (or July 1984 or July 2004).

www.infineon.com